

CURRICULUM VITAE

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Education

- 1975 Ph.D., Economics, Princeton University
- 1969 M.A., Economics, Princeton University
- 1969 M.P.A., (Master of Public Affairs) Woodrow Wilson School of Public & International Affairs, Princeton University
- 1967 B.A., Economics, Yale University, *cum laude* with High Honors in Economics

Experience

- Principal, MiCRA: Microeconomic Consulting and Research Associates, Inc., Washington, D.C.; August 1991 - present.
- Resident Scholar, American Enterprise Institute for Public Policy Research, Washington, D.C.; May 1989 - April 1990, Adjunct Scholar, May 1990 - present.
- Visiting Lecturer of Public and International Affairs, Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, NJ; Spring Semester, 1991
- Senior Vice President, ICF Consulting Associates, Inc., Washington, D.C.; November 1989 - August 1991.
- Research Associate Professor of Psychology, The American University, Washington, D.C.; September 1983 - 1990.
- Deputy Assistant Attorney General for Economic Analysis, Antitrust Division, U.S. Department of Justice, Washington, D.C.; October 1985 - May 1989.

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Director, Economic Policy Office, Antitrust Division, U.S. Department of Justice, Washington, D.C.; September 1983 - September 1985.

Research Associate, Center for the Study of American Business, Washington University in St. Louis; July 1978 - June 1985.

Associate Professor, Department of Economics, Washington University in St. Louis; July 1978 - June 1985. Chairman, Graduate Committee, 1978 - 1980. Chairman, Undergraduate Committee, 1980 - 1983.

Assistant Professor, Department of Economics, Washington University in St. Louis; September 1972 - June 1978.

Assistant in Instruction, Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, N.J.; 1969 - 1971.

Research Consultant, Ford Foundation, Kingston, Jamaica, W.I.; Summer 1969.

Fields Taught

Graduate: Industrial Organization, Economic Development and Planning, Microeconomic Theory, International Trade, International Finance, Economic Theories of Behavior, Applied Microeconomics.

Undergraduate: Government and Business, Industrial Organization, International Trade, International Finance, Economic Development, Intermediate Microeconomic Theory, Intermediate Macroeconomic Theory, Introductory Microeconomic Theory, Introductory Macroeconomic Theory.

Grants

National Science Foundation. Grant title: "Income Maximizing in Choice and Rate Effects," 1988 - 1991.

National Science Foundation. Grant title: "Application of Economic Theory to Operant Schedule Effects," 1985 - 1987.

National Science Foundation. Grant title: "Income and Choice," 1983 - 1985.

Professional Activities

Referee, *American Economic Review*, *The Bell Journal of Economics/Rand Journal*, *Economic Inquiry*, *Industrial Organization Review*, *Journal of Industrial Economics*, *Journal of Law and Economics*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Southern Economic Journal*.

Member, Editorial Board, *International Journal of the Economics of Business*.

Member, American Bar Association, American Economic Association, Southern Economic Association, Western Economic Association.

Languages

French, German

Publications

"Exclusionary Behavior in the Market for Operating System Software: the Case of Microsoft," in *Opening Networks to Competition: the Regulation and Pricing of Access*, David Gabel and David Weiman, eds.; Kluwer Publishers, 1996 (forthcoming), with Kenneth Baseman and Glenn Woroch.

"Riding the Wave: Exclusionary Practices in Markets for Microprocessors Used in IBM-Compatible Personal Computers," Conference and Festschrift in Honor of Merton J. Peck, Yale University, September 30, 1994, and *International Journal of the Economics of Business* 2-2 (July 1995), pp. 241-262, with Robert W. Wilson.

"The Economics of Intellectual Property Protection for Software: The Proper Role for Copyright," American Council on Interoperable Systems, Washington, D.C., June 1994, and *StandardView: ACM Perspectives on Standardization* 3-2 (June 1995), pp.68-78, with Kenneth Baseman and Glenn Woroch.

"Microsoft Plays Hardball: Use of Nonlinear Pricing and Technical Incompatibility to Exclude Rivals in the Market for Operating Software," *The Antitrust Bulletin* 40-2 (Summer 1995), pp.265-315, with Ken Baseman and Glenn Woroch.

"Copyright Protection of Software Can Make Economic Sense," *The Computer Lawyer*, 12 (February 1995), pp. 10, 18-28, with Kenneth C. Baseman and Glenn Woroch.

"Exclusionary Practices in High-Technology Industries," *The St. Louis Bar Journal*, 16 (Summer 1994), pp. 28-34.

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"Monsanto v. Spray-Rite: Resale Price Maintenance Reexamined," in *The Antitrust Revolution: The Role of Economics*, John E. Kwoka and Lawrence J. White, eds.; Scott, Foresman and Company, Glenview, Illinois, second edition, 1994.

"A Commentary on the 1992 U.S. Merger Guidelines," *International Merger Law*, 22 (June 1992), pp. 14-19.

"The Use of Stock Market Returns in Antitrust Analysis of Mergers," *Review of Industrial Organization*, 7-1 (1992), pp. 1-11, and *Economic Analysis Group Discussion Paper #88-1*, January 1988, with Robert H. McGuckin and Peter Waldstein.

"Implications of U.S. Experience with Horizontal Mergers and Takeovers for Canadian Competition Policy," in *The Law and Economics of Competition Policy*, Frank Mathewson, Michael Trebilcock and Michael Walker, eds.; The Fraser Institute, Vancouver, B.C., 1990.

"Maricopa and Maximum-Price Agreements: Time for a New Legal Standard?" *Journal of Health Economics*, 7 (June 1988), pp. 185-190.

"Maximizing Present Value: A Model to Explain Why Moderate Response Rates Obtain on Variable-Interval Schedules," *Journal of the Experimental Analysis of Behavior*, 49 (May 1988), pp. 331-338, with Alan Silberberg and Toshio Asano.

"Sources of the 'Crisis' in Liability Insurance: An Economic Analysis," in *Yale Journal of Regulation*, 5 (Summer 1988), pp. 367-395; *Economic Analysis Group Discussion Paper #88-2*, February 1988; and *An Update on the Liability Crisis: Tort Policy Working Group*, U.S. Government Printing Office: 181-487:60075, March 1987, with Richard N. Clark and David D. Smith.

"State and Federal Regulation in the Market for Corporate Control," *The Antitrust Bulletin*, 32 (Fall 1987), pp. 661-691, and *Economic Analysis Group Discussion Paper #86-4**, January 1986, with Margaret E. Guerin-Calvert and Robert H. McGuckin.

"Income and Choice Between Different Goods," *Journal of the Experimental Analysis of Behavior*, 48 (September 1987), pp. 263-275, with Alan Silberberg and David Shurtleff.

"Inferior-Good and Giffen-Good Effects in Monkey Choice Behavior," *Journal of Experimental Psychology: Animal Behavior Processes*, 13 (1987), pp. 292-301, with Alan Silberberg and Toshio Asano.

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"Efficiencies, Failing Firms, and Alternatives to Merger: A Policy Synthesis," *The Antitrust Bulletin*, 31 (Summer 1986), pp. 431-450, and *Economic Analysis Group Discussion Paper #86-14*, August 1986, with John Kwoka.

Oil Pipeline Deregulation: Report of the U.S. Department of Justice, U.S. Government Printing Office: 1986, 491-510:40159, May 1986, with Charles J. Untiet.

"Merger Policy and Enforcement at the Antitrust Division: The Economist's View," *Antitrust Law Journal*, 54 (Spring 1985), pp. 109-115.

"Reanalysis of the Equation for Simple Action," *Journal of the Experimental Analysis of Behavior*, 43 (March 1985), pp. 265-277, with Alan Silberberg, Michael Gray and Randolph Ollom.

"Considering the Effects of Financial Incentive and Professional Ethics on 'Appropriate' Medical Care," *Journal of Health Economics*, 3 (December 1984), pp. 223-237, with Robert Woodward.

Deficits and Dollars: The Effects of Government Deficits in an International Economy. Center for the Study of American Business, Contemporary Series 3, 1982.

"Physician Productivity, Remuneration Method, and Supplier-Induced Demand," in *Issues in Physician Reimbursement*, N.T. Greenspan (ed.), HCFA, 1981, pp. 115-134, with Robert Woodward.

"Paying the Doctor: A Model of Work-Leisure Decisions under Alternative Remunerations," *Proceedings of the American Statistical Association*, 1979, with Robert Woodward.

Vertical Control of Markets: Business and Labor Practices. Ballinger Publishing Company, Cambridge, Mass., 1978.

"Vertical Control by Labor Unions," *American Economic Review*, 67 (June 1977), pp. 309-322. Reprinted as Publication Number 17, Center for the Study of American Business, November 1977.

"Vertical Control with Variable Proportions," *Journal of Political Economy*, 82 (July - August 1974), pp. 783-802.

Preliminary Survey of Jamaican Management Manpower: Resources and Requirements. Jamaican Institute of Management, 1969.

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Conference, Seminar, Working and Discussion Papers

- "Privatization and Regulation in the Restructuring of Electric Utilities in Eastern Europe," IBRD Conference on the Privatization of Electric Utilities, Prague, The Czech Republic, September 1993.
- "Implications of the United States Experience with Regulation and Antitrust for Competition Policy in Countries in Transition from Centrally Planned Economies to Market Economies," IBRD/EDI/USAID Seminar on Microeconomics, Vienna, Austria, July 1993.
- "The Economics of Punitive Damages." Punitive Damages after TXO: American Bar Association Antitrust Section Meeting, New York, August, 1993.
- "Regulatory Alternatives for FERC Following the Energy Policy Act of 1992," The Federal Energy Bar Association Mid-Year Meeting, Washington, D.C., November 19, 1992.
- "The Economics of Credit Card Interest Rate Caps," Seminars at the Economic Analysis Group, U.S. Department of Justice, September 29, 1992; the Board of Governors of the Federal Reserve System, October 7, 1992; and the D.C. Bar Association, November 19, 1992.
- "Straws in the Bottleneck: A Proposal for Efficient Network Interconnection," presented at the Tenth Biennial Conference of the International Telecommunications Society, Cannes, France, June 1992; *Journal of Regulatory Economics* Editors' Conference, San Diego, October 1992, with John Woodbury and Glenn Woroch.
- "Economic Principles of Penalties for Antitrust Violations, and the Role of the Economist in Corporate Sentencing," Corporate Sentencing Under the Federal Sentencing Guidelines for An Antitrust Defendant, The Federal Bar Association, Antitrust and Trade Regulation Section, May 1992.
- "The State of Antitrust in 1991: A Kindler, Gentler Antitrust?," The CATO Institute Conference, 1991, with Steve Calkins.
- "Economic Analysis and Policy Implications of the Financial Interest and Syndication Rule," Telecommunications Policy Research Conference, October 1990, with John Woodbury.

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"The Design and Evaluation of Competitive Rules Joint Ventures for Mergers and Natural Monopolies," American Enterprise Institute conference on Policy Approaches to the Deregulation of Network Industries, October 1990, and at the American Economic Association Meetings, December 1989, with John Woodbury.

"Regulation and the Partially Monopolized Network: Lessons from Telecommunications," American Enterprise Institute conference on Policy Approaches to the Deregulation of Network Industries, October 1990, with Roger Noll.

"Price Regulation and Common Carrier Regulation," AEI Conference on Oil Pipeline Deregulation, American Enterprise Institute.

"Regulation of New Crude-Oil Pipelines: Natural Monopoly and Information Externalities," AEI Conference on Oil Pipeline Deregulation, American Enterprise Institute.

"Economic Theory as the Missing Link in the Merger Guidelines," American Bar Association Antitrust Section Spring Meeting, March 1990.

"Testing the Structure-Competition Relationship on Cross-Sectional Firm Data," *Economic Analysis Group Discussion Paper #88-6*, May 1988, and at the Southern Economic Association Meetings, November 1986, with Donald M. Brown.

"Deterring Criminal Antitrust Behavior: Sanctions versus Structure," Stanford University Conference, June 1987.

"Deregulation of Electric Power Generation," New Mexico State University Conference, September 1986, and Edison Electric Institute, April 1987.

"Do Successful Tender Offers Benefit Bondholders?" Southern Economic Association Meetings, November 1986, with Catherine Benham, Donald M. Brown and Susan E. Woodward.

"Professional Ethics and Financial Incentives: 'Appropriate' Medical Care," *Washington University Department of Economics Working Paper #40*, May 1982, with Robert Woodward.

"Hospital Care Expenditure Inflation: Crisis or Consumption?" *Washington University Department of Economics Working Paper #43*, December 1982, with Robert Woodward and Walter Chien.

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"Transfer Pricing within U.S. Corporations," Sixth U.S.-Soviet Economic Symposium; Alma-Ata, Kazakhstan, U.S.S.R., May - June, 1981.

"The Impact of Automobile Mileage Standards," Western Economic Association Meetings, 1979, with Michael Smirlock.

"The Effect of Factor-Augmenting Technical Change on Factory Demand, and the Response by Factor Suppliers," Western Economic Association Meetings, October 1977.

"Vertical Integration in Telecommunications," Telecommunications Policy Research Conference, April 1974.

Other Papers

Brief Amicus Curiae of Economics Professors and Scholars in Support of Respondent, Supreme Court of the United States, *Lotus Development Corp. v. Borland International, Inc.*, No. 94-2003, December 1995.

"Implementing Competitive Rules Joint Ventures for Railroads," IBRD (World Bank), April, 1995.

"Critical Loss and Critical Elasticity: Their Derivation and Use in Market Definition for Mergers," November 1994.

"When Nominally Monopolistically-Competitive Firms are Really Perfectly Competitive: Going First-Class on the Paris Metro," July 1986.

"Mandatory Energy Performance Standards and Residential Energy Demand," 1981, with Alan Rockwood and Richard Adams.

"The Effects of Endogenous Quality Change on Demand and Costs," October 1977.

Testimony, Depositions, Commissioned Studies, and Government Consulting

Florida Panthers Hockey Club: Expert witness in Florida Panthers Hockey Club v. Miami Sports and Exhibition Authority and The City of Miami; U.S. District Court, Southern District of Florida Miami Division, Case No. 96-21 68-CIV Trial Testimony, August, 1996.

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AT&T: (a) Direct Testimony and Deposition in State of Indiana, Indiana Utility Regulatory Commission, Cause No. 397051994, April 1994. (b) Position Paper on Docket No. 94-07-02: Development of the Assumptions, Tests, Analysis and Review to Govern Telecommunications Service Reclassifications in Light of the 8 Criteria Set Forth in Section 8 of Public Act 94-83. State Of Connecticut, Department of Public Utility Control, October 1994. (c) Comments on the Position Papers on Docket No. 94-07-02. State Of Connecticut, Department of Public Utility Control, November 1994. (d) Rebuttal Testimony in Kansas Corporation Commission Docket No. 190, 492-U, July 15, 1996.

ADM: "An Evaluation of: The Cost to U.S. Animal-Feed Manufactures of an Alleged Price-Fixing Conspiracy by Lysine Manufactures 1992-1995", August, 1996.

MCI: "Depreciation and Capital Recovery Issues, A Response to Professor Hausman", with K. Baseman and S. Woodward, FCC Docket No. 96-98, July 1996.

K-2, Rossignol, Salomon, Tecnica, Skis Dynastar, Marker and The Ski Market: Expert witness in Sports Investment Co. vs. The Ski Market, Ltd., Inc., et al., U.S. District Court, District of Rhode Island, C.A. No. 95-097T. Deposition, December 1995.

U.S. Department of Justice, Antitrust Division: (a) Expert witness in U.S. v. AT&T, 1981; (b) Regulation of oil pipelines, August 1983. (c) Expert witness in United States of America v. Engelhard Corporation, Floridin Company, U.S. Borax Inc., U.S. Silica Inc. Case No. 6:96-CV-45 (WLS), Depositions, Trial Testimony August 1995.

City of Los Angeles: Declaration in Air Transport Association of America, et al., v. City of Los Angeles, City of Los Angeles Department of Airports and Los Angeles Board of Airport Commissioners, Docket No. 50176, March 1995.

The Bon-Ton Stores, Inc.: Declaration in The Bon-Ton Stores, Inc. v. The May Department Stores Company, McCurdy & Company, Inc., and Wilmorite, Inc., Civil Action No. 94-CV-6454L, November 1994.

Cyrix Corporation: Deposition in Cyrix Corporation v. Intel Corporation, December 1993.

Thermadyne Industries: Deposition in Thermadyne Industries, Inc. and Coyne Cylinder Co. v. K.C. Cylinder et al., December 1993.

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IBRD (World Bank): (a) Privatization and Regulation in the Restructuring of Electric Utilities in Eastern Europe, September 1993; (b) Implications of the United States Experience with Regulation and Antitrust for Competition Policy in Countries in Transition from Centrally Planned Economies to Market Economies, July 1993.

Credit Card Coalition: "The Economics of Credit Card Interest Rate Caps," 1993, with Laurence H. Meyer.

Coalition to Preserve the Financial Interest and Syndication Rule: (a) Testimony before the Federal Communications Commission, December 7, 1990, in the matter of Evaluation of the Syndication and Financial Interest Rules, MM Docket No. 90-162. (b) Submitted reports: "Economic Analysis and Policy Implications of the Financial Interest and Syndication Rule," June 14, 1990; "Reply Comments," August 1, 1990; "Economic Analysis and Policy Implications of the Financial Interest and Syndication Rule," January 24, 1991, with John Woodbury. (c) Declaration of Frederick R. Warren-Boulton, August 7, 1992, Exhibit 7, Comments of the Coalition to Preserve the Financial Interest and Syndication Rule on Proposed Modification of Network Consent Decrees. In United States of America v. CBS, Inc. Civil No. 74-3599-RJK, United States of America v. American Broadcasting Companies, Inc. Civil No. 74-3600-RJK, and United States of America v. National Broadcasting Company, Inc. Civil No. 74-3601-RJK.

California Public Utility Commission, Division of Ratepayer Advocacy: Proposed merger of Southern California Edison Company and San Diego Gas and Electric Company, July 1990.

Altai, Inc.: Expert witness in Computer Associates, Inc. v. Altai, Inc., April 1990.

NFL Players Association: Deposition in Marvin Powell v. National Football League, September 1989.

Consolidated Aluminum Corporation: Deposition in Indal, Inc. v. Consolidated Aluminum Corp., April 1983.

Battelle, Pacific Northwest Laboratories. Analyses of bidding for offshore oil leases and of the effects of Building Energy Performance Standards on energy demand, September 1979 -1981.

U.S. Senate Commerce Committee, Senator Danforth presiding: Testimony on corporate average fuel economy (CAFE) standards, November 15, 1979.

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State of Missouri, Office of the Public Counsel: Expert witness on electric utility rate structures, 1978.

Federal Trade Commission: Study on Vertical Distribution Arrangements, January 1, 1977 - August 1, 1978

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

APPLICATION OF ERNEST G.	§	
JOHNSON, DIRECTOR OF THE	§	
PUBLIC UTILITY DIVISION,	§	
OKLAHOMA CORPORATION	§	Cause No. 970000064
COMMISSION TO EXPLORE THE	§	
REQUIREMENTS OF SECTION 271	§	
OF THE TELECOMMUNICATIONS	§	
ACT OF 1996	§	

STATEMENT OF JOHN W. MAYO
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTHWEST

I. INTRODUCTION AND QUALIFICATIONS

1. My name is John W. Mayo. My business address is Department of Economics, College of Business Administration, The University of Tennessee, Knoxville, TN, 37996-0550. I am currently a Professor of Economics in the College of Business at The University of Tennessee.

2. I hold a Ph.D. in economics from Washington University, St. Louis (1982), with a principal field of concentration in industrial organization, which includes the analysis of antitrust and regulation. I also hold both an M.A. (Washington University, 1979) and a B.A. (Hendrix College, Conway, Arkansas, 1977) in economics.

3. Since my graduation, I have taught economics at both the University of Tennessee and at Virginia Polytechnic Institute (VPI). Also, I have served as the Chief Economist, Democratic Staff of the U.S. Senate Small Business Committee. Both my research and teaching have centered on the relationship of government and business, with particular emphasis on regulated industries. I have authored numerous articles and research monographs, and have

written a comprehensive text entitled *Government and Business: The Economics of Antitrust and Regulation*, (with David L. Kaserman), The Dryden Press, 1995. I have also written a number of specialized articles on economic issues in the telecommunications industry. These articles include discussions of competition and pricing in the telecommunications industry and have appeared in academic journals such as the *RAND Journal of Economics*, the *Journal of Law and Economics*, the *Journal of Regulatory Economics*, and the *Yale Journal on Regulation*. A more detailed accounting of my education, publications and employment history is contained in Exhibit JWM-1.

II. PURPOSE AND OVERVIEW

4. The Telecommunications Act of 1996 (FTA) provides for the reintegration of the regional Bell Operating Companies (BOCs) into in-region interLATA (long distance) services if certain specific conditions are satisfied. Specifically, along with a variety of other prerequisites, the reintegration of the BOCs into interexchange services must be shown to be in the public interest. The purpose of my testimony, then, is twofold. *First*, I provide a framework for assessing the public interest merits of BOC re-entry into the interexchange industry. *Second*, because the BOCs rest their case for re-entry into interexchange markets on the alleged lack of competition in those markets today, I report the results of my inquiry into the extent of competition in the interexchange industry. My testimony, together with those of Mr. Steven Turner and Dr. Warren-Boulton (who provide discussions of the current status of competition within local exchange markets), provides a foundation from which it is possible to draw correct conclusions regarding the merits of reintegration of Southwestern Bell Telephone Company (SWBT).

III. REINTEGRATION AND THE PUBLIC INTEREST STANDARD

A. General Requirements of the FTA.

5. The purpose of the FTA is to create a pro-competitive, deregulatory environment. The Conference Committee Report which accompanied the final legislation clearly summarizes the aim of this statute. It is, "... designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening up all telecommunications markets to competition."

6. The goals of the FTA are supported by economic theory. A long lineage of economic analysis has confirmed the merits of effectively competitive market resource allocation compared to resource allocation under monopoly markets. Because monopoly and competitive markets generate important differences in pricing, quality, innovation, and diversity of offerings, it is critical that policymakers act to support unwaveringly the standard of promoting and protecting effective competition in the wake of the FTA.

7. The FTA establishes a three-part standard for the reintegration of BOCs into in-region interLATA services. While BOCs may apply for the authority to sell in-region interLATA toll services at any time, they must satisfy three preconditions before receiving approval. First, the BOC must be able to demonstrate that it is providing interconnection to other local exchange providers who are providing competitive services predominantly over their own facilities. Moreover, the terms and conditions under which the BOC provides such

interconnection to competitive carriers must conform to and fully implement the standards established by a competitive checklist contained within the FTA.¹

8. Next, a BOC seeking to reintegrate must comply with the FTA's required non-discrimination and structural separation provisions. Importantly, the Federal Communications Commission (FCC) has interpreted these provisions to mean that not only must the BOC not discriminate among third parties, but regulators must also be able to establish that the BOC does not discriminate between itself (or subsidiaries) and third party providers.²

9. Finally, the FTA requires that the FCC determine whether approval of a BOC application to provide long distance service in a particular state is in the public interest. From an economic standpoint, such a determination requires that the benefits accruing to telecommunications consumers because of reintegration exceed any potential harm done to those consumers.

B. Determining What is in the Public Interest.

10. The "public interest" inquiry depends on whether reintegration will be likely to harm or, alternatively, promote competition in the telecommunications industry. In this regard, the economic deliberation centers on three propositions that should be readily agreed to:

- [1] Entry by a monopolist into an effectively competitive market can lessen competition;
- [2] Entry by a competitor into a monopolized market unequivocally enhances competition; and

Alternatively, if no other carrier has requested access and interconnection in a particular state, this first requirement can be satisfied by a statement of generally available terms and conditions that complies with the checklist. That statement must also be submitted to the relevant state commission for approval.

² See Statement of Denise Crombie, filed on behalf of AT&T.

- [3] Entry by a competitor with no monopoly power base into an effectively competitive market cannot harm competition.

11. Both the BOCs and the prospective entrants into local exchange markets appear to agree with these basic propositions. Thus, the debate regarding the merits of reintegration is not centered primarily on the economic principles, but rather turns on the current status of competition in local exchange and long distance telecommunications markets. In particular, the BOCs argue that the local exchange market is effectively competitive and long distance is effectively monopolized. If, indeed, that is an accurate description of telecommunications markets today, then under the principles identified above, the BOCs, including SWBT, should be permitted to reintegrate into the interexchange business. (Principle 2).

12. If, on the other hand, local exchange markets retain substantial monopoly power while interexchange markets are effectively competitive, then the risk of anti-competitive harm from reintegration is likely to make entry by SWBT at the present time antithetical to the public interest. (Principle 1). In this event, it is critical that policy makers ensure that reintegration does not occur until such time that local exchange markets are effectively competitive. Once local exchange markets become subject to effective competition and the prospects that reintegration can harm competition have passed, reintegration should be permitted. (Principle 3).

13. In that regard, the FTA points toward an ambitious program of enabling local exchange competition as quickly as possible. While that competition-enabling policy -- if properly implemented -- will yield considerable benefits, it is vital that effective competition in local exchange markets be in place *prior* to the re-integration of the BOCs into the interexchange industry. Specifically, premature reintegration by BOCs, while they retain a significant

monopoly power base, would create both the incentives and wherewithal for the BOCs to engage in actions that *reduce* the extent of competition in the telecommunications industry. Accordingly, it is vital that the Oklahoma Commission carefully consider the status of competition in local exchange markets to determine if, in fact, reintegration of SWBT into the interexchange industry is in the public interest.

14. Effective competition connotes an absence of significant monopoly power. Specifically, when effective competition is present, the economic benefits from public policy intervention are more that offset by the economic costs of any public policy efforts designed to mitigate the relatively small amounts of market imperfections that exist. While economists envision a theoretical range of competition, spanning from perfect competition to pure monopoly, a benchmark for the determination of public policy attention is the presence or absence of effective competition. In Section IV of my statement, I will address the issue of whether the interexchange market is subject to effective competition.

C. Entry by a Monopolist into an Effectively Competitive Market Can Reduce Competition.

15. Integration by a monopolist that is regulated at one stage of a vertical process into adjacent vertical stages raises a host of concerns regarding monopoly leveraging. In particular, monopoly leveraging is said to occur when a firm with significant monopoly power in one market is able to exploit or extend that monopoly power in related markets. This exploitation or expansion of monopoly power may be affected through a variety of strategies including vertical price squeezes, bundling or tying, price discrimination, or quality discrimination.

16. Thus, it is not always pro-competitive to allow more competitors into a market. While economic principles indicate that entry into monopolized markets is unequivocally pro-

competitive, the same principles recognize that participation by a monopolist in a related market, if permitted, may reduce competition. Indeed, it was for this very reason that the Modified Final Judgment (MFJ) imposed an important and logical threshold for reintegration at the time of divestiture. Specifically, to protect and to promote competition the MFJ restricted the participation of BOCs in interLATA toll markets unless and until it could be demonstrated that their participation in those markets would not harm competition. It is precisely this standard that represents the "public interest" today.

D. Entry by a Competitor into Monopolized Markets Enhances Competition.

17. From a theoretical standpoint, the introduction of any additional seller into a monopoly market cannot harm competition, nor can it make the economic consequences for consumers any worse. Moreover, if the new entrant is a *competitive* seller, unwilling to collude with the incumbent, then this entry will result in increased competition and market outcomes that benefit consumers. Under any such scenario, the introduction of an additional competitor into a monopoly market will provide incentives for the incumbent to reduce costs, improve the quality of outputs and impose prices which are, at least somewhat, below the full, profit-maximizing, monopoly level. In application, the magnitude of the increase in competition and attendant benefits to consumers depends on market-specific circumstances, but the underlying principle goes unchallenged.

E. Entry by a Firm Without a Monopoly Power Base Cannot Harm Competition.

18. *In the absence of a monopoly power base*, any new entrant is forced to compete on its own merits. If this new entrant is more efficient than incumbent sellers, the competitive process may be enhanced. If the entrant is less efficient, it will be forced to exit the market.

However, because this entrant does not possess the anti-competitive tools associated with monopoly power, it cannot possibly corrupt the existing competitive process through its participation.

IV. COMPETITION IN THE INTERLATA MARKET

19. The BOCs argue that the interexchange industry is characterized by monopoly, and that therefore reintegration by BOCs such as SWBT may provide for increased competition and the enhancement of consumer welfare. If, alternatively, the interexchange industry is subject to effective competition, then the market is already capable of providing virtually all of the consumer benefits possible. Moreover, if, and to the extent that, the provision of local exchange services is subject to significant monopoly power, the reintegration of SWBT and the other BOCs into such an effectively competitive market can significantly reduce competition in the interexchange industry.

A. The Evolution of Competition in the Long Distance Market.

20. Prior to the divestiture of AT&T in 1984, the Bell System was the nation's dominant telephone company. In 1974, concerns over the ability and propensity of this integrated monopoly provider of telephone service to thwart the development of competition led to a Department of Justice antitrust suit. The suit charged that the Bell system had engaged in monopolistic practices and had stymied the development of competition in the interexchange industry. The source of this propensity for monopolization was the Bell System's control of the local exchange monopoly facilities. That suit ended in 1982 with the Modification of Final Judgment that, *inter alia*, separated the ownership of the local exchange monopoly facilities from

AT&T. Given that separation, Judge Greene anticipated that AT&T would be "unable to engage in monopoly pricing in any market."

21. Subsequent to the divestiture, the long distance market evolved rapidly. Today, there are roughly 500 firms competing in the interexchange marketplace in the United States. Moreover, the cornerstone of competitive markets -- consumer choice -- is amply evident throughout the United States. Exhibit JWM-2 depicts the number of long distance carriers from which consumers in various cities and towns around the country may choose. As is readily apparent, consumers have *many* available long distance carriers from which to choose. In Oklahoma, a typical consumer in Oklahoma City today can choose from at least 16 long distance firms.

22. Moreover, the quality and pricing of these long distance services has continued to improve in the post-divestiture era. Equal access is now fully implemented so that all firms have an opportunity to provide interexchange service using comparable dialing arrangements.³ The divestiture of AT&T and the subsequent post-divestiture policies designed to enable competition have been successful and consumers are clearly enjoying the fruits of the vigorous competitive rivalry that exist among long distance carriers.

23. Monopoly power is the ability to control price and exclude competition. Fortunately, the evolution of industrial organization economics has provided a framework for determining whether a firm provides its services under conditions of significant monopoly power or, alternatively, faces effective competition. In particular, one can assess whether a firm

³ Parenthetically, it is worth noting that SWBT's intraLATA service is *not* subject to the same equal access terms that enable competition in the interLATA market. Indeed, the BOCs have consistently sought to delay or deny this clearly pro-competitive move.

possesses significant monopoly power by examining three critical determinants: (1) the elasticity (or responsiveness) of supply by others, (2) market share, and (3) demand characteristics.⁴

B. The Elasticity of Supply in the Interexchange Market in Oklahoma.

24. The supply elasticity of rival firms affects an individual firm's market power because any firm contemplating an increase in price above competitive levels must consider the extent to which such rivals can be expected to respond by increasing their output. Increases in output by rival firms will exert downward pressure on the market price, thereby reducing (or eliminating) the original price increase. Thus, where other firms are sufficiently willing and able to meet customer demand in response to an increase in price by successfully expanding their output, the market power of the firm contemplating the anti-competitive price increase is diminished. The ability and willingness of alternative firms to expand their output in the face of a price increase, in turn, depends critically on the height of barriers to entry and expansion. If barriers to entry and expansion are high (*i.e.*, the elasticity of "fringe" firms' supply is low) then market power is heightened. If, alternatively, barriers to entry and expansion are low, then the market power of any incumbent firm is diminished.

25. The data suggests that the relative ease of entry into and expansion within the interLATA interexchange industry has resulted in a very high responsiveness, or elasticity of firm supply. Exhibit JWM-3, depicts the number of long distance firms competing in the interexchange market. As can be seen, roughly 500 firms are vying for the patronage of long distance customers nationwide.

⁴ For a more detailed discussion of the market power exercise, see William M. Landes and Richard Posner, "Market Power in Antitrust Cases," HARVARD L. REV, March 1981; and David L. Kaserman and John W. Mayo GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION, Dryden Press, 1995, Chapter 4.

26. Moreover, not only have firms entered the interexchange market, but they have also been aggressive in developing the capacity for future output expansions. Indeed, as seen in Exhibit JWM-4, AT&T's competitors have been very active in developing fiber optic transmission networks. Such capacity for future output expansions is important because capacity limitations facilitate monopolistic price increases on the part of incumbent firms. That is, any attempt by any incumbent interexchange carrier, say AT&T, to raise prices to supra-competitive levels would be aided if the capacity of its rival firms were limited. Alternatively, where the capacity of rival firms is abundant (and customers readily demonstrate a willingness to switch to alternative carriers), the ability of any firm contemplating a supra-competitive price increase is limited. In the case at hand, it is well known that the interexchange industry is rife with capacity. For instance, a recent study found that AT&T's competitors could readily absorb a significant percentage of AT&T's traffic immediately and within three months take roughly one-third of all of AT&T's traffic simply by utilizing spare switch ports and existing transport facilities.⁵

27. Importantly, the distribution of capacity in the interexchange industry is spread across a variety of carriers with transmission capability. Indeed, in Oklahoma, there are at least 6 facilities-based interexchange carriers. This assures that no interexchange firm has control over any bottleneck facilities that might aid in attempts to sustain supra-competitive prices.

28. Finally, not only have firms been aggressive about their expansion of physical facilities in the interexchange industry, but they have also demonstrated in incontrovertible terms

⁵ T.L. Brand *et al.*, *An Updated Study of AT&T's Competitors' Capacity to Absorb Rapid Demand Growth*, in *Ex Parte Presentation in Support of AT&T's Motion for Reclassification as a Non-Dominant Carrier*, filed in CC Dkt. No. 79-252 at Att. B (Apr. 24, 1995).

their willingness and desire to expand output. Exhibit JWM-5 depicts the growth of output of competitors to AT&T in the post-divestiture period. As is readily apparent, competitors have exhibited a remarkable growth rate of roughly twenty percent per year over the past dozen years.

29. The breadth of interexchange service offerings in Oklahoma also indicates that there is an elasticity of supply by rival firms. Not only do a large number of firms offer long distance service in Oklahoma and nearly 500 offer service nationwide, but this competition exists across virtually all product lines within the long distance market. Every service offered by AT&T has competitive alternatives, whether MTS, Private Line, or high volume inbound services. Moreover, these services and competitive alternatives are abundant in both urban and rural areas. Finally, there has been an explosion of new service offerings by interexchange carriers in the post-divestiture period. In Oklahoma, AT&T alone has introduced over 45 new offerings in the post-divestiture period. In another recent state-level examination, it was found that a minimum of 130 new interexchange service offerings were introduced between 1984 and 1994.⁶ This remarkable proliferation of services in the post-divestiture period provides objective proof regarding the highly elastic nature of supply in the interexchange industry.

30. In sum, the data unequivocally reveals that barriers to entry and expansion are extremely low and the elasticity of competitive supply is quite high.

C. AT&T's Decline in Market Share Reflects the Competitiveness of the Interexchange Market.

31. At the outset of the post-divestiture period, AT&T had a preponderance (over 90 percent) of interLATA traffic in the United States. As seen in Exhibit JWM-6, however,

⁶ See Exhibit JWM-7, at note 120.

AT&T's minutes-of-use market share has dropped consistently during the past decade. At the same time, the output and breadth of competitors' service offerings has expanded dramatically. By 1996 (3rd quarter), AT&T's interstate minutes-of-use market share had fallen to 52.8 percent.⁷ Typically, the pattern and level of intrastate interLATA minutes-of-use market shares has followed the interstate market share statistics. The consistent and pronounced declines in AT&T's market share reveal a vulnerability of AT&T to competitive attacks. Moreover, the decline in market share has come about during a period in which the real price of long distance services have fallen by over 50 percent. This decline in market share reveals a pronounced vulnerability of interexchange companies in the event any unwarranted attempt to raise prices to anti-competitive levels.

D. Demand Characteristics Indicate That the Interexchange Market is Competitive.

32. The demand characteristics of the interexchange market unequivocally reinforce the competitive impact of the high elasticity of firm supply and the distribution of market shares in the intrastate market. *First*, market growth has been pronounced. Sales of interexchange services have grown dramatically since the divestiture. This large growth rate has had the effect of attracting new firms into the market and has mitigated the risk of failure for prospective new entrants. *Second*, the distribution of demand across telecommunication customers has also contributed to the vulnerability of incumbent firms. Specifically, a large proportion of consumer demand for interexchange services is accounted for by a relatively small percentage of customers. That skewed distribution, together with a pronounced propensity of customers to

⁷ See *Long-Distance Market Shares*, Third Quarter 1996, Federal Communications Commission, Industry Analysis Division, January 1997.